

What is claimed is:

1. A sheet handling apparatus comprising:

5 a plurality of inserter trays for having insert  
sheets stacked thereon, said insert sheets being inserted  
between the recording sheets transported from an image  
forming apparatus having an image forming section;

10 a sheet feeding controller that controls feeding of  
the insert sheets stacked on the plurality of inserter  
trays; and

15 a sheet feeding mode setting device that sets one of  
a plurality of sheet feeding modes defining respectively  
a plurality of stacking manners for stacking plural types  
of the insert sheets on said plurality of inserter trays  
and a plurality of sheet feeding manners corresponding  
respectively to said stacking manners and employed by  
said sheet feeding controller.

20 2. A sheet handling apparatus according to claim 1,  
wherein said sheet feeding controller controls feeding of  
the insert sheets stacked on said plurality of inserter  
trays in accordance with the sheet feeding mode set by  
said sheet feeding mode setting device.

25 3. A sheet handling apparatus according to claim 1,  
wherein said plurality of sheet feeding modes include at  
least a first sheet feeding mode in which a same type of  
insert sheets are stacked on each of said plurality of  
inserter trays, and a second sheet feeding mode in which

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plural types of said insert sheets are stacked together on at least one of said plurality of inserter trays.

4. A sheet handling apparatus according to claim 3, wherein in said first sheet feeding mode, said sheet  
5 feeding controller sequentially feeds the insert sheets sheet by sheet from one of said plurality of inserter trays, and then changes an inserter tray from which the insert sheets are to be fed, from said one to a next one of said plurality of inserter trays.

10 5. A sheet handling apparatus according to claim 3, wherein in said second sheet feeding mode, said sheet feeding controller sequentially feeds the plural types of said insert sheets stacked together on said at least one of the inserter trays sheet by sheet starting from a top  
15 page sheet of the insert sheets.

6. A sheet handling apparatus according to claim 3, comprising an insert sheet number determining device that determines a total number of the insert sheets to be inserted between the recording sheets, a sheet stacking  
20 detector that detects presence or absence of the insert sheets stacked on each of said plurality of inserter trays, a comparator operable in said first sheet feeding mode to compare the total number of the insert sheets determined by said insert sheet number determining device  
25 with a total number of inserter trays on which presence of the insert sheets stacked thereon is detected by said sheet stacking detector, and a warning device that gives

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a predetermined warning if a result of the comparison by said comparator shows that the total number of the insert sheets does not coincide with the total number of the inserter trays.

5           7. A sheet handling apparatus according to claim 6, wherein said insert sheet number determining device determines the total number of the insert sheets through manual input by a user.

10           8. A sheet handling apparatus according to claim 6, wherein said image forming apparatus comprises an original reading device that reads images on a set of originals for forming images on the recording sheets, and a color original counter that recognizes color originals from said set of originals based on the images read by  
15           said original reading device and counts a number of the recognized color originals; and wherein said insert sheet number determining device determines the number of color originals counted by said color original counter as the total number of the insert sheets to be inserted between  
20           the recording sheets.

          9. A sheet handling apparatus according to claim 8, comprising an image formation inhibiting device that inhibits image formation by said image forming section while said counting of color originals is being carried  
25           out by said color original counter.

          10. A sheet handling apparatus according to claim 1, comprising a predetermined information reading device

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that reads predetermined information indicative of said sheet feeding mode recorded on a predetermined one of the insert sheets in advance, and said sheet feeding mode setting device sets said sheet feeding mode based on said predetermined information read by said predetermined information reading device.

11. A sheet handling apparatus according to claim 10, wherein said predetermined information is recorded at a location outside an image formed region of said predetermined one of the insert sheets.

12. A sheet handling apparatus according to claim 10, wherein said predetermined information is recorded on a leading edge portion of said predetermined one of the insert sheets.

13. A sheet handling apparatus according to claim 10, wherein said predetermined one of the insert sheets is a top one of the insert sheets stacked on each of said plurality of inserter trays.

14. A sheet handling apparatus according to claim 10, wherein said predetermined information reading device is brought into a position close to the insert sheets to read said predetermined information.

15. A sheet handling apparatus according to claim 10, wherein said sheet feeding controller comprises a driver for carrying out a sheet feeding operation for feeding the insert sheets stacked on said plurality of inserter trays, said driver being disposed to drive said

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predetermined information reading device.

16. A sheet handling apparatus according to claim 15, wherein said reading by said predetermined information reading device is carried out in synchronism with the feeding of the insert sheets by said sheet feeding controller.

17. A sheet handling apparatus according to claim 10, wherein said predetermined information reading device comprises at least one light reflection type sensor, and said predetermined information comprises a mark with a color being different in brightness from color of said predetermined one of the insert sheets.

18. A sheet handling apparatus according to claim 10, comprising an error display device that displays failure to read said predetermined information by said predetermined information reading device.

19. A sheet handling apparatus according to claim 10, comprising a re-stacking detector that detects re-stacking of the insert sheets on said plurality of inserter trays, and said sheet feeding mode setting device is responsive to failure to read said predetermined information by said predetermined information reading device, for suspending setting of the sheet feeding mode until the re-stacking of the insert sheets is detected.

20. A sheet handling apparatus according to claim 10, wherein said sheet feeding mode setting device is

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responsive to failure to read said predetermined information by said predetermined information reading device, for setting the sheet feeding mode through manual setting by a user.

- 5           21. A sheet handling apparatus according to claim 10, comprising a recording sheet sheet feeding inhibiting device responsive to failure to set the sheet feeding mode based on said predetermined information read by said predetermined information reading device, for inhibiting  
10           feeding of the recording sheets.

22. A sheet handling apparatus according to claim 1, wherein said sheet feeding mode setting device sets the sheet feeding mode through manual setting by a user.

- 15           23. A sheet handling apparatus according to claim 1, wherein the insert sheets stacked on the plurality of inserter trays are fed so as to bypass said image forming section.

24. A method of controlling a sheet handling apparatus comprising a plurality of inserter trays for  
20           stacking insert sheets thereon, said insert sheets being inserted between said recording sheets transported from an image forming apparatus having an image forming section, comprising the steps of:

- 25           controlling feeding of said insert sheets stacked on said plurality of inserter trays; and

          setting one of a plurality of sheet feeding modes defining respectively a plurality of stacking manners for

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stacking plural types of the insert sheets on each of said plurality of inserter trays and a plurality of sheet feeding manners corresponding respectively to said stacking manners and employed by said step of controlling feeding said insert sheets.

25. A method according to claim 24, wherein said step of controlling feeding the insert sheets controls feeding of the insert sheets stacked on said plurality of inserter trays in accordance with the sheet feeding mode set by said step of setting the plurality of sheet feeding modes.

26. A method according to claim 24, wherein said plurality of sheet feeding modes include at least a first sheet feeding mode in which a same type of insert sheets are stacked on each of said plurality of inserter trays, and a second sheet feeding mode in which plural types of said insert sheets are stacked together on at least one of said plurality of inserter trays.

27. A method according to claim 26, wherein in said first sheet feeding mode, said step of controlling feeding said insert sheets sequentially feeds the insert sheets sheet by sheet from one of said plurality of inserter trays, and then changes an inserter tray from which the insert sheets are to be fed, from said one to a next one of said plurality of inserter trays.

28. A method according to claim 26, wherein, in said second sheet feeding mode, said step of controlling

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feeding said insert sheets sequentially feeds the plural types of said insert sheets stacked together on said at least one of the inserter trays sheet by sheet starting from a top page sheet of the insert sheets.

- 5           29. A method according to claim 26, comprising the steps of: determining a total number of the insert sheets to be inserted between said recording sheets, detecting presence or absence of the insert sheets stacked on each of said plurality of inserter trays, comparing, in said
- 10 first sheet feeding mode, the determined total number of the insert sheets with a total number of inserter trays on which presence of the insert sheets stacked thereon is detected by said detecting step, and giving a
- 15 predetermined warning if a result of the comparison shows that the total number of the insert sheets does not coincide with the total number of the inserter trays.

30. A method according to claim 29, wherein said insert sheet number determining step determines the total number of insert sheets through manual input by a user.

- 20           31. A method according to claim 29, comprising the steps of: reading images on a set of originals for forming images on the recording sheets, and recognizing color originals from said set of originals based on the read image and counting a number of the recognized color
- 25 originals; and wherein said insert sheet number determining step determines the number of color originals counted by said color original counting step as the total



number of the insert sheets to be inserted between said recording sheets.

32. A method according to claim 31, comprising an image information inhibiting step of inhibiting image formation by said image forming section while said counting of color originals is being carried out by said color original counting step.

33. A method according to claim 24, comprising a predetermined information reading step of reading predetermined information indicative of said sheet feeding mode recorded on a predetermined one of the insert sheets in advance, and wherein said sheet feeding mode setting step sets said sheet feeding mode based on said predetermined information read by said predetermined information reading step.

34. A method according to claim 33, wherein said predetermined information is recorded at a location outside an image formed region of said predetermined one of the insert sheets.

35. A method according to claim 33, wherein said predetermined information is recorded on a leading edge portion of said predetermined one of the insert sheets.

36. A method according to claim 33, wherein said predetermined one of the insert sheets is a top one of the insert sheets stacked on each of said plurality of inserter trays.

37. A method according to claim 33, wherein said

predetermined information reading device reads said predetermined information by a predetermined reading sensor located in a position close to the insert sheets.

38. A method according to claim 37, wherein said  
5 predetermined information reading step drives said predetermined reading sensor by a driver for carrying out a sheet feeding operation for feeding the insert sheets stacked on said plurality of inserter trays by said step of controlling feeding of said insert sheets.

39. A method according to claim 38, wherein said  
10 reading by said predetermined information reading step is carried out in synchronism with the feeding of the insert sheets by said step of controlling feeding of said insert sheets.

40. A method according to claim 33, wherein said  
15 predetermined information comprises a mark with a color being different in brightness from color of said predetermined one of the insert sheets.

41. A method according to claim 33, further  
20 comprising an error displaying step of displaying failure to read said predetermined information by said predetermined information reading step.

42. A method according to claim 33, comprising a  
25 re-stacking detecting step of detecting re-stacking of the insert sheets on said plurality of inserter trays, and wherein said sheet feeding mode setting step is responsive to failure to read said predetermined

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information by said predetermined information reading step, for suspending setting of the sheet feeding mode until the re-stacking of the insert sheets is detected.

43. A method according to claim 33, wherein said  
5 sheet feeding mode setting step sets the sheet feeding mode through manual setting by a user in response to failure to read said predetermined information by said predetermined information reading step.

44. A method according to claim 33, comprising a  
10 recording sheet sheet feeding inhibiting step of inhibiting feeding of the recording sheets in response to failure to set the sheet feeding mode based on said predetermined information read by said predetermined information reading step.

45. A method according to claim 24, wherein said  
15 sheet feeding mode setting step sets the sheet feeding mode through manual setting by a user.

46. A method according to claim 24, wherein the  
20 insert sheets stacked on the plurality of inserter trays are fed so as to bypass said image forming section.

47. A machine readable storage medium storing a  
program for executing a method of controlling a sheet  
handling apparatus comprising a plurality of inserter  
trays for stacking insert sheets thereon, said insert  
25 sheets being inserted between said recording sheets  
transported from an image forming apparatus having a  
sheet handling section, said method comprising the steps

of:

controlling feeding of said insert sheets stacked on said plurality of inserter trays; and

5 setting one of a plurality of sheet feeding modes  
defining respectively a plurality of stacking manners for  
stacking plural types of the insert sheets on each of  
said plurality of inserter trays and a plurality of sheet  
feeding manners corresponding respectively to said  
stacking manners and employed by said step of controlling  
10 feeding said insert sheets.

48. An image forming apparatus comprising:

at least one inserter tray for having insert sheets  
stacked thereon, said insert sheets being inserted  
between the recording sheets transported from a sheet  
15 handling apparatus having a sheet handling sectionn;  
a sheet feeder that feeds the insert sheets stacked  
on said inserter tray;

a stacking manner input terminal that selects a  
desired stacking manner from at least two kinds of  
20 stacking manners, for stacking the insert sheets on said  
inserter tray; and

a controller responsive to selection of a  
predetermined stacking manner by said stacking manner  
input terminal, for controlling said sheet feeder to feed  
25 the insert sheets from said inserter tray without  
interrupting a job being executed when insert sheets are  
re-stacked on said inserter tray after exhaustion of all

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the insert sheets stacked on said inserter tray.

49. An image forming apparatus according to claim 48, wherein said at least two kinds of stacking manners include a first stacking manner in which a single type of insert sheets are stacked on said inserter tray, and a second stacking manner in which plural types of insert sheets are stacked on said inserter tray, and wherein said controller is responsive to selection of said second stacking manner by the stacking manner input terminal, for controlling said sheet feeder to feed the insert sheets from said inserter tray without interrupting the job being executed if insert sheets are re-stacked on said inserter tray after exhaustion of all the insert sheets stacked on said inserter tray.

50. An image forming apparatus according to claim 48, further comprising a reading device that reads images on originals, an image forming device provided in said image forming section, for forming images on the recording sheets based on the images read by said image reading device, a post processing device comprising said inserter tray, and said sheet feeder, said post processing device carrying out a post process of inserting the insert sheets which are fed so as to bypass said image forming device, between the recording sheets having the images formed thereon by said image forming device, and an insert information input terminal that inputs at least one inserting position of the recording

sheets having the images formed thereon by said image forming device where the insert sheets are to be inserted, said inserter tray comprising a plurality of inserter trays, and wherein said controller controls an order of said plurality of inserter trays in which the insert sheets are fed from said plurality of inserter trays by said sheet feeder, based on information input from said stacking manner input terminal.

51. An image forming apparatus according to claim 48, wherein said inserter tray comprises a plurality of inserter trays, the image forming apparatus further comprising a plurality of insert sheet detectors provided in a fashion corresponding respectively to said plurality of inserter trays, for detecting presence or absence of at least one insert sheet on said inserter trays, and an insert mode selector that selects an insert mode for inserting the insert sheets between the recording sheets, and wherein said controller is responsive to selection of said insert mode by said insert mode selector, for controlling said image forming device to start an image forming operation if at least one insert sheet is detected by any of said plurality of insert sheet detectors.

52. An image forming apparatus according to claim 51, wherein said controller controls said insert sheet detectors to determine presence or absence of insert sheets on said plurality of inserter trays in order from

upper ones to lower ones in a vertical direction.

53. An image forming apparatus according to claim 51, wherein said controller controls said insert sheet detectors to determine presence or absence of insert  
5 sheets on said plurality of inserter trays in order from lower ones to upper ones in a vertical direction.

54. An image forming apparatus according to claim 48, wherein said at least two kinds of stacking manners include a first stacking manner in which a single type of  
10 insert sheets are stacked on said inserter tray, and a second stacking manner in which plural types of insert sheets are stacked on said inserter tray, said inserter tray comprising a plurality of inserter trays, the image forming apparatus further comprising a plurality of  
15 insert sheet detectors provided in a fashion corresponding respectively to said plurality of inserter trays, for detecting presence or absence of at least one insert sheet on said inserter trays, and an insert mode selector that selects an insert mode for inserting the  
20 insert sheets between the recording sheets, and wherein said controller is responsive to selection of said insert mode by said insert mode selector and selection of said second stacking manner by said stacking manner input terminal, for controlling said image forming device to  
25 start an image forming operation, if at least one insert sheet is detected by any of said plurality of insert sheet detectors.

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55. An image forming apparatus according to claim 48, further comprising an insert sheet detector that detects at least one insert sheet stacked on said inserter tray, and wherein said at least two kinds of stacking manners include a first stacking manner in which a single type of insert sheets are stacked on said inserter tray, and a second stacking manner in which plural types of insert sheets are stacked on said inserter tray, said inserter tray comprising one or a plurality of inserter trays, and wherein said controller is responsive to exhaustion of all the insert sheets stacked on said one or said plurality of inserter trays while said second stacking manner is selected by said stacking manner input terminal during outputting of said job and detection of re-stacking of at least one insert sheet on said one or said plurality of inserter trays by said insert sheet detector, for controlling said sheet feeder to start feeding the at least one insert sheet from said one or said plurality of inserter trays upon lapse of a predetermined period of time after said detection of re-stacking.

56. An image forming apparatus according to claim 48, further comprising an insert sheet detector that detects at least one insert sheet stacked on said inserter tray, and a job restart input terminal for instructing restart of a job, said at least two kinds of stacking manners including a first stacking manner in

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which a single type of insert sheets are stacked on said inserter tray, and a second stacking manner in which plural types of insert sheets are stacked on said inserter tray, said inserter tray comprising one or a plurality of inserter trays, and wherein said controller is responsive to exhaustion of all the insert sheets stacked on said one or said plurality of inserter trays while said second stacking manner is selected by said stacking manner input terminal during outputting of said job and detection of re-stacking of at least one insert sheet on said one or said plurality of inserter trays by said insert sheet detector, for controlling said sheet feeder to feed the at least one insert sheet from said one or said plurality of inserter trays if the restart of said job is instructed by said job restart input terminal after the detection of re-stacking of the at least one insert sheet by said insert sheet detector.

57. A sheet handling apparatus comprising:

at least one inserter tray for stacking thereon insert sheets to be inserted between recording sheets having images formed thereon in a main body of an image forming apparatus; and

a sheet feeder for feeding the insert sheets stacked on the inserter tray;

wherein when a predetermined stacking manner is selected from at least two kinds of stacking manners for stacking insert sheets on said inserter tray, said sheet

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feeder is controlled to feed insert sheets from said inserter tray without stopping a job being executed if the insert sheets stacked on said inserter tray are exhausted and thereafter insert sheets are re-stacked on said inserter tray.

58. A sheet handling apparatus according to claim 57, wherein said at least two kinds of stacking manners include a first stacking manner in which a single type of insert sheets are stacked on said inserter tray, and a second stacking manner in which plural types of insert sheets are stacked on said inserter tray, and wherein when said second stacking manner is selected, said sheet feeder is controlled to feed the insert sheets from said inserter trays without stopping the job being executed if the insert sheets stacked on said inserter tray are exhausted and thereafter insert sheets are re-stacked on said inserter tray.

59. A sheet handling apparatus according to claim 57, further comprising a sheet handling device comprising said inserter tray, and said sheet feeder, said post processing device carrying out a post process of inserting the insert sheets which are fed so as to bypass said main body of said image forming apparatus, between the recording sheets having the images formed thereon in said main body of said image forming apparatus, said inserter tray comprising a plurality of inserter trays, and wherein an order of said plurality of inserter trays

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in which the insert sheets are fed from said plurality of inserter trays by said sheet feeder is controlled based on input information on said stacking manner.

5 60. A sheet handling apparatus according to any one of claim 57, wherein said inserter tray comprises a plurality of inserter trays, the apparatus further comprising a plurality of insert sheet detectors provided in a fashion corresponding respectively to said plurality of inserter trays, for detecting presence or absence of  
10 at least one insert sheet on said inserter trays, and wherein when an insert mode for inserting the insert sheets between the recording sheets is selected, an image forming operation is started in said main body of said image forming apparatus if at least one insert sheet is  
15 detected by any of said plurality of insert sheet detectors.

61. A sheet handling apparatus according to claim 60, wherein said insert sheet detectors are controlled to determine presence or absence of insert sheets on said  
20 plurality of inserter trays in order from upper ones to lower ones in a vertical direction.

62. A sheet handling apparatus according to claim 60, wherein said insert sheet detectors are controlled to determine presence or absence of insert sheets on said  
25 plurality of inserter trays in order from lower ones to upper ones in a vertical direction.

63. A sheet handling apparatus according to claim

57, wherein said at least two kinds of stacking manners include a first stacking manner in which a single type of insert sheets are stacked on said inserter tray, and a second stacking manner in which plural types of insert sheets are stacked on said inserter tray, said inserter tray comprising a plurality of inserter trays, the image forming apparatus further comprising a plurality of insert sheet detectors provided in a fashion corresponding respectively to said plurality of inserter trays, for detecting presence or absence of at least one insert sheet on said inserter trays, and wherein when an insert mode for inserting the insert sheets between the recording sheets is selected and said second stacking manner is selected, an image forming operation is started in said main body of said image forming apparatus if at least one insert sheet is detected by any of said plurality of insert sheet detectors.

64. A sheet handling apparatus according to claim 57, further comprising a plurality of insert sheet detectors provided in a fashion corresponding respectively to said plurality of inserter trays, for detecting presence or absence of at least one insert sheet on said inserter trays, said at least two kinds of stacking manners including a first stacking manner in which a single type of insert sheets are stacked on said inserter tray, and a second stacking manner in which plural types of insert sheets are stacked on said

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inserter tray, said inserter tray comprising one or a plurality of inserter trays, and wherein when all the insert sheets stacked on said one or said plurality of inserter trays are exhausted while said second stacking manner is selected during outputting of said job and thereafter re-stacking of at least one insert sheet on said one or said plurality of inserter trays is detected by said insert sheet detector, said sheet feeder is controlled to start feeding the at least one insert sheet from said one or said plurality of inserter trays upon lapse of a predetermined period of time after the detection of re-stacking.

65. A sheet handling apparatus according to claim 57, further comprising a plurality of insert sheet detectors provided in a fashion corresponding respectively to said plurality of inserter trays, for detecting presence or absence of at least one insert sheet on said inserter trays, said at least two kinds of stacking manners including a first stacking manner in which a single type of insert sheets are stacked on said inserter tray, and a second stacking manner in which plural types of insert sheets are stacked on said inserter tray, said inserter tray comprising one or a plurality of inserter trays, and wherein when all the insert sheets stacked on said one or said plurality of inserter trays are exhausted while said second stacking manner is selected during outputting of said job and

thereafter re-stacking of at least one insert sheet on said one or said plurality of inserter trays is detected by said insert sheet detector, said sheet feeder is controlled to start feeding the at least one insert sheet from said one or said plurality of inserter trays if restart of said job is instructed after the detection of re-stacking of the at least one insert sheet by said insert sheet detector.

66. An insert control method applied to a sheet handling apparatus comprising at least one inserter tray for having insert sheets stacked thereon, said insert sheets being inserted between the recording sheets transported from an image forming section, and a sheet feeder that feeds the insert sheets stacked on said inserter tray, the method comprising the steps of

selecting a desired stacking manner from at least two kinds of stacking manners, for stacking the insert sheets on said inserter tray, and

controlling said sheet feeder to feed the insert sheets from said inserter tray without interrupting a job being executed when insert sheets are re-stacked on said inserter tray after exhaustion of all the insert sheets stacked on said inserter tray while a predetermined stacking manner is selected by said stacking manner selecting step.

67. An insert control method according to claim 66, wherein said at least two kinds of stacking manners

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include a first stacking manner in which a single type of insert sheets are stacked on said inserter tray, and a second stacking manner in which plural types of insert sheets are stacked on said inserter tray, and wherein said controlling step is responsive to selection of said second stacking manner by the stacking manner selecting step, for controlling said sheet feeder to feed the insert sheets from said inserter tray without interrupting the job being executed if insert sheets are re-stacked on said inserter tray after exhaustion of all the insert sheets stacked on said inserter tray.

68. An insert control method according to claim 66, further comprising the steps of reading images on originals, forming images on the recording sheets based on the images read by said image reading step, carrying out a post process of inserting the insert sheets which are fed so as to bypass said image forming section, between the recording sheets having the images formed thereon by said image forming section, and inputting at least one inserting position of the recording sheets having the images formed thereon by said image forming section where the insert sheets are to be inserted, said inserter tray comprising a plurality of inserter trays, and wherein said controlling step controls an order of said plurality of inserter trays in which the insert sheets are fed from said plurality of inserter trays by said sheet feeder, based on information input by said

stacking manner selecting step.

69. An insert control method according to claim 66, wherein said inserter tray comprises a plurality of inserter trays, the method further comprising the steps of detecting presence or absence of at least one insert sheet on said inserter trays, and selecting an insert mode for inserting the insert sheets between the recording sheets, and wherein said controlling step is responsive to selection of said insert mode by said insert mode selecting step, for controlling said image forming section to start an image forming operation if at least one insert sheet is detected on any of said plurality of inserter trays by said detecting step.

70. An insert control method according to claim 69, wherein said insert sheet detecting step is controlled by said controlling step to determine presence or absence of insert sheets on said plurality of inserter trays in order from upper ones to lower ones in a vertical direction.

71. An insert control method according to claim 69, wherein said insert sheet detecting step is controlled by said controlling step to determine presence or absence of insert sheets on said plurality of inserter trays in order from lower ones to upper ones in a vertical direction.

72. An insert control method according to claim 66, wherein said at least two kinds of stacking manners

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include a first stacking manner in which a single type of insert sheets are stacked on said inserter tray, and a second stacking manner in which plural types of insert sheets are stacked on said inserter tray, said inserter tray comprising a plurality of inserter trays, the method further comprising the steps of detecting presence or absence of at least one insert sheet on said inserter trays, and selecting an insert mode for inserting the insert sheets between the recording sheets, and wherein said controlling step is responsive to selection of said insert mode by said insert mode selecting step and selection of said second stacking manner by said stacking manner selecting step, for controlling said image forming section to start an image forming operation, if at least one insert sheet is detected on any of said plurality of inserter trays by said detecting step.

73. An insert control method according to claim 66, further comprising the step of detecting at least one insert sheet stacked on said inserter tray, said at least two kinds of stacking manners including a first stacking manner in which a single type of insert sheets are stacked on said inserter tray, and a second stacking manner in which plural types of insert sheets are stacked on said inserter tray, said inserter tray comprising one or a plurality of inserter trays, and wherein said controlling step is responsive to exhaustion of all the insert sheets stacked on said one or said plurality of

inserter trays while said second stacking manner is selected by said stacking manner selecting step during outputting of said job and detection of re-stacking of at least one insert sheet on said one or said plurality of inserter trays by said insert sheet detecting step, for controlling said sheet feeder to start feeding the at least one insert sheet from said one or said plurality of inserter trays upon lapse of a predetermined period of time after said detection of re-stacking.

74. An insert control method according to claim 66, further comprising the steps of detecting at least one insert sheet stacked on said inserter tray, and instructing restart of a job, said at least two kinds of stacking manners including a first stacking manner in which a single type of insert sheets are stacked on said inserter tray, and a second stacking manner in which plural types of insert sheets are stacked on said inserter tray, said inserter tray comprising one or a plurality of inserter trays, and wherein said controlling step is responsive to exhaustion of all the insert sheets stacked on said one or said plurality of inserter trays while said second stacking manner is selected by said stacking manner selecting step during outputting of said job and detection of re-stacking of at least one insert sheet on said one or said plurality of inserter trays by said insert sheet detecting step, for controlling said sheet feeder to feed the at least one insert sheet from

said one or said plurality of inserter trays if the restart of said job is instructed by said job restart instructing step after the detection of re-stacking of the at least one insert sheet by said insert sheet detecting step.

75. A machine readable storage medium storing a program for executing an insert control method applied to a sheet handling apparatus comprising at least one inserter tray for having insert sheets stacked thereon, said insert sheets being inserted between the recording sheets transported from an image forming section, and a sheet feeder that feeds the insert sheets stacked on said inserter tray, said insert control method comprising the steps of

selecting a desired stacking manner from at least two kinds of stacking manners, for stacking the insert sheets on said inserter tray, and

controlling said sheet feeder to feed the insert sheets from said inserter tray without interrupting a job being executed when insert sheets are re-stacked on said inserter tray after exhaustion of all the insert sheets stacked on said inserter tray while a predetermined stacking manner is selected by said stacking manner selecting step.

76. A sheet handling apparatus comprising:

a plurality of inserter trays that hold insert sheets which are to be inserted between sheets

transported from an image forming apparatus;

a plurality of feeders that feed the insert sheets stacked on said inserter trays respectively;

an instruction inputting terminal that inputs an  
5 instruction selecting one of a plurality of sheet feeding modes including a first mode for plural types of insert sheets stacked on said inserter trays respectively and a second mode for plural types of insert sheets stacked on at least one of said inserter trays; and

10 a sheet feeding controller that controls said plurality of feeders to feed the insert sheets from said plurality of inserter trays in accordance with the instruction inputted from said instruction inputting terminal.

15 77. A method of controlling a sheet handling apparatus including a plurality of inserter trays that hold insert sheets which are to be inserted between sheets transported from an image forming apparatus, and a plurality of feeders that feed the insert sheets stacked  
20 on said inserter trays respectively, said method comprising the steps of:

inputting an instruction selecting one of a plurality of sheet feeding modes including a first mode for plural types of insert sheets stacked on said  
25 inserter trays respectively and a second mode for plural types of insert sheets stacked on at least one of said inserter trays; and

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controlling said plurality of feeders to feed the insert sheets from said plurality of inserter trays in accordance with the instruction inputted from said instruction inputting terminal.

5           78. A machine readable storage medium storing a program for executing a method of controlling a sheet handling apparatus including a plurality of inserter trays that hold insert sheets which are to be inserted between sheets transported from an image forming  
10           apparatus, and a plurality of feeders that feed the insert sheets stacked on said inserter trays respectively, said method comprising the steps of:

          inputting an instruction selecting one of a plurality of sheet feeding modes including a first mode  
15           for plural types of insert sheets stacked on said inserter trays respectively and a second mode for plural types of insert sheets stacked on at least one of said inserter trays; and

          controlling said plurality of feeders to feed the  
20           insert sheets from said plurality of inserter trays in accordance with the instruction inputted from said instruction inputting terminal.

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